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Drying Fruits, Vegetables, and Herbs: General Safe Food Handling Recommendations

Joan Hegerfeld-Baker
South Dakota State University

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DRYING FRUITS, VEGETABLES, AND HERBS

General Safe Food Handling Recommendations

Joan Hegerfeld-Baker, SDSU Extension Food Safety Specialist

To maintain safety and quality, several factors must be considered when drying fruits, vegetables, and herbs. Keep in mind that specific food products often have recommendations that are unique to them. Drying removes the moisture from food so that microorganisms such as bacteria, yeasts, and molds are less likely to grow; however, drying does not effectively destroy them. Because there is not a heat treatment that effectively destroys disease-causing microorganisms, it is critical to use safe food-handling practices when growing and handling fruits, vegetables, and herbs for drying.

The optimum drying temperature is 140°F. If higher temperatures are used, the food will develop "case hardening" and moisture will not be able to escape from the food; this, in turn, will lead to a moldy food product. Therefore, do not rush the drying process.

Low humidity is also needed when drying foods. If the surrounding air is humid, the foods will not dry effectively. Increasing the air movement away from the food will assist in the drying process.

Foods can be dried in the oven, under the sun, on the vine, or indoors using a dehydrator. There are several resources that provide tested methods for dehydrating vegetables, fruits, and herbs—ask your county Extension office for information on specific drying methods.

When dehydrating foods, using good sanitary practices is critical to reducing the risk of contaminating foods with pathogens and spoilage microorganisms:

1. After harvesting produce or herbs, place in containers and locations that are free from additional contamination (for example, pets and wild animals will not have access).
2. Begin the dehydration process soon after harvesting.
3. Clean and sanitize all utensils, containers, the food-contact surfaces of dehydrating equipment, and work surfaces. To effectively clean, wash with warm, soapy water; rinse thoroughly with warm water; and sanitize using one of the following methods:
   a. Immerse utensils and drying trays in a chlorine bleach* solution (1 ½ teaspoons of bleach per gallon of water) for 10 seconds, then air dry (do not use a towel).
   Or,
   b. Prepare a sanitizing spray solution of ½ teaspoon of household bleach per quart of water, and spray on food-contact surfaces. Let air-dry.
4. Always wash hands before handling foods—that includes harvesting.
5. Consider wearing disposable gloves when preparing foods for dehydrating. Wash hands before putting gloves on, and always remove gloves whenever you change a task (such as answering the phone or preparing another food item). If your gloves become soiled or torn during food preparation, replace them before resuming food preparation. Do not wash gloves to reuse—dispose of gloves after use. Gloves can give a false sense of security. Change gloves as recommended—do not contaminant food with gloves used incorrectly.

*Household chlorine bleach is a common sanitizer. Use an unscented bleach for food-contact surfaces and utensils.

Packaging and storage: dried foods are susceptible to insect contamination and moisture reabsorption; therefore, it is important to store immediately in a package that does not allow the foods to reabsorb moisture. Vacuum packaging is a good option. Also, pack in smaller quantities so that the contents are consumed all at once—this avoids the need to reopen the package and expose the contents to air and moisture.

SOURCES:

Andres E., Harrison S., So Easy to Preserve, 5th edition, Cooperative Extension University of Georgia. 2006

Converse B., Be A Winner! Serve Safe Food!, South Dakota Cooperative Extension Service 2002.

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